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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,353	10/31/2000	Glenn Ferguson	033048-012	8643

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EXAMINER

EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 02/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

P24

Office Action Summary

Application No.

09/699,353

Applicant(s)

FERGUSON ET AL.

Examiner

Bradley Edelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-100 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-100 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This Office action is a first action on the merits of this application. Claims 1-100 are presented for examination.

Specification

1. The disclosure is objected to because of the following informalities: the status of related cases mentioned in the specification (see p. 11, line 10, for example) must be updated.

Claim 28 is objected to because of the following informalities: the claim appears to contain a unintended repeated phrase "plurality of configuration entities further comprises."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Zager et al. (U.S. Patent No. 6,393,386, hereinafter "Zager").

In considering claim 1, Zager discloses a data model characterizing the interaction of all elements of a computer network (Abstract, "model of the system") comprising:

A plurality of software entities, hardware entities, network entities (col. 6, lines 15-18, "software," "hardware," "hub, router"), configuration entities, monitoring entities (col. 7, lines 10-30, "state" of "managed objects," "alarms"), and DNS entities (col. 27, lines 54-62, "DNS").

In considering claim 2, Zager further discloses a plurality of queue entities ("event queues") that may be used by agents ("Agent Manager") in accessing information from the data model regarding any of the information contained therein (col. 20, lines 29-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zager.

In considering claims 3-6, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each

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other”), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, “relationship types have the following attributes... one-to-many... many-to-one”). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 7, Zager further discloses that the software entities further comprise:

Units entities, unit monitor types entities, unit conflicts entities, role-type entities, platform entities, package-type entities, account-type entities, package-type entities, application-type entities, and pool-type entities, (col. 3, line 50, “business units”; col. 15, lines 28-29, “alarm...unit”; col. 33, line 41, “pool”; col. 35, lines 59-62, “mission package,” col. 35, lines 34-35, “configuration-time roles”; col. 17, line 31, “multiple platforms”; “applications,”). Although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a network in the network model system taught by Zager, to more accurately model the network.

In considering claims 8-25, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one"). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 26, Zager further discloses that the configuration entities further comprise:

Conduits entities, IP-type entities, services entities, role-type configuration entities, component type entities, and status entities (col. 22, lines 50-61, "IP services"; col. 7, lines 23-25, "type," "events," "alarms"; col. 35, lines 34-35, "configuration-time roles"). Although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a

network in the network model system taught by Zager, to more accurately model the network.

In considering claim 27, Zager further discloses that the configuration entities comprise a plurality of manufacturing model entities (col. 25, lines 40-41, "manufacturer's make and model number").

In considering claim 28, Zager further discloses that the configuration entities comprise a plurality of component objects entities (col. 25, lines 28-29, "enterprise object identifier").

In considering claim 29, Zager further discloses a plurality of device roles history entities (col. 15, lines 61-62, "interaction history known as an alarm").

In considering claim 30, Zager further discloses that the conduits entities represent communication portholes across a firewall (col. 17, lines 35-38, "authentication and authorization security"). Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one").

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Although the system taught by Zager does not explicitly describe the specific entity relationship claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the claimed conduit to hardware relationship to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claims 31-39, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one"). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 40, Zager further discloses that the monitoring components further comprise class-type entities (col. 21, lines 54-56, "calls to the same class,"

manager applications entities (col. 27, lines 26-27, "Agent Manager"), device application configuration entities (col. 7, lines 10-18), ACL and authorization entities (col. 17, lines 35-38, "authentication and authorization security"), SNMP variables entities (col. 26, lines 39-67, "SNMP"), and VIP groups entities (col. 24, lines 11-39, "IP subnets").

Although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a network in the network model system taught by Zager, to more accurately model the network.

In considering claim 41, Zager further discloses a plurality of autonomous system map entities (col. 35, lines 47-48, "repository maps the service structurally to a specific bundle").

In considering claims 42-52, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one"). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship

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to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 53, Zager further discloses that the hardware entities include memory components entities (col. 6, lines 15-18, "hardware"; col. 28, line 6, "dictionary memory structures"), storage components entities (inherent in a computer hardware system), bus components entities (also inherent), interface entities (col. 8, lines 33-41, "interface"), device entities ("hardware"), CPU entities (inherent in hardware), and circuits entities (inherent in hardware). Although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a network in the network model system taught by Zager, to more accurately model the network.

In considering claims 54-62, and 64-65, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one").

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Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 63, although Zager does not mention a virtual LAN, Examiner takes Official notice that virtual LANs are well known in the art. Thus, it would have been obvious to include a virtual LAN entity in the system taught by Zager so that the model would include all known networking technologies, thereby better estimating the configuration of the actual network.

In considering claim 66, Zager further teaches including DNS entities (col. 27, lines 54-62, "DNS"), including hosts and domains entities ("service provider"), ACL entities and allow queries (col. 17, lines 35-38, "authentication and authorization security"), and master IPs (col. 30, lines 15-26, "IP"). Although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a network in the network model system taught by Zager, to more accurately model the network.

In considering claim 67, Zager further discloses a plurality of DNS configuration entities (inherent in the DNS entities).

In considering claims 68-77, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one"). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 78, Zager further discloses that the network entities further comprise accounts and account related entities (col. 3, line 50, "business units"), customer tiers entities (col. 16, lines 48-60, "customers"), data centers entities (col. 14, lines 30-50, "control repository"), and IP address entities ("IP"). However, Zager does not explicitly discuss the use of VLAN entities. Nonetheless, Examiner takes Official notice that virtual LANs are well known in the art. Thus, it would have been obvious to

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include a virtual LAN entity and VLAN-related entities, as claimed, in the system taught by Zager so that the model would include all known networking technologies, thereby better estimating the configuration of the actual network. Note that although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a network in the network model system taught by Zager, to more accurately model the network.

In considering claim 79, Zager further discloses a plurality of Site configuration entities (col. 30, lines 15-26, "client site[s]").

In considering claims 80-94, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one"). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the

system taught by Zager, to allow for a more flexible and accurate model of the network system.

In considering claim 95, Zager further discloses that the queues entities further comprise agent queues entities, agent-related commands entities (col. 20, lines 29-41, "Agent Manager," "queue infrastructure"). Although certain of the claim terms are not explicitly described by Zager, they are thus either disclosed via alternate terminology, or else are well known components in a network. It would have thus been obvious to include any known components of a network in the network model system taught by Zager, to more accurately model the network.

In considering claims 96 and 97, Zager further discloses agent queue and agent command mutex entities (col. 19, lines 16-19, "mutex and asynchronous queue services").

In considering claims 98-100, Zager further discloses that the model includes the entities' relationships to each other (col. 6, lines 25-27, "this model represents the various components, relevant subcomponents, and their service relationships to each other"), and further discloses that the entities may be related to each other according to one-to-many and many-to-one relationships (col. 29, lines 46-61, "relationship types have the following attributes... one-to-many... many-to-one"). Although the system taught by Zager does not explicitly describe the entity-by-entity relationships claimed, it

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nonetheless suggests, in cols. 6 and 29, that entities can have any type of relationship to other entities. Thus, it would have been obvious to a person having ordinary skill in the art to include the specific entity-specific relationships mentioned in the claims to the system taught by Zager, to allow for a more flexible and accurate model of the network system.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

For all correspondences: (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Bradley Edelman

BE
January 27, 2004